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a single second upper panel defined by a single foldable frame member that has a folded and an unfolded orientation, and a material covering portions of the frame member of the upper panel when the frame member of the upper panel is in the unfolded orientation, with the material of the upper panel assuming the unfolded orientation of its associated frame member, the second panel having opposing first and second end edges; a first interconnecting piece that couples the first end edge of the second panel to the outer periphery of the first panel; and a second interconnecting piece that couples the second end edge of the second panel to the outer periphery of the first panel; wherein the first and second end edges extend ^{outwardly} beyond the outer periphery of the first panel.

REMARKS

Claim 1 has been amended. Claims 1-4 and 71-72 are still pending in the present application. Entry of the amendments, and reexamination and allowance of the pending claims are respectfully requested.

Claim 1 has been amended to clarify the recitations regarding the material that covers the frame members. This amendment is not made to overcome the prior art rejection.

Claims 1-4 and 71-72 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. Des. 341,407 to McLeese ("McLeese '407") in view of U.S. Patent No. 5,778,915 to Zheng ("Zheng '915"). This rejection is respectfully traversed.

The Examiner acknowledges that McLeese does not teach "the opposite edges of the second upper panel each extending beyond and coupled to the outer periphery of the first base panel by an extension." To compensate for this deficiency in McLeese, the Examiner cites FIGS. 3B, 3C and 3D of Zheng '915 as disclosing interconnecting pieces 37, 37a, 37b that are used to extend the edges 80a and 82a of the panels 72b and 72e, respectively, in FIG. 7 beyond the outer periphery of the base panel 72a.

Applicant respectfully submits that McLeese and Zheng '915 cannot be combined because their respective teachings would not lead a person skilled in the art ("the skilled person") to the structure claimed in claim 1.

First, the pieces labeled (H) by the Examiner in McLeese cannot correspond to the claimed first and second interconnecting pieces because the pieces (H) do not couple the end edges of the second (upper) panel to the outer periphery of the first (base) panel. As

best shown in FIGS. 1 and 2 of McLeese, the pieces (H) couple the side edges of the upper panel to the outer periphery of the base panel. In addition, the end edges of the upper panel in McLeese are rounded at a curved point (see FIG. 2), so it would not be practical or feasible to couple an interconnecting piece to the end edge of the upper panel since one would then have a very thin piece of material that connects the rounded end edge of the upper panel to the outer periphery of the base panel. The very thin piece of material would break because it could not support the forces between the upper panel and the base panel. **Thus, this configuration (i.e., the location of the pieces H and the shape of the end edges of the upper panel) ensures that the end edges of the upper panel cannot extend beyond the outer periphery of the base panel.**

This distinction is very important because it will have a significant impact on what the skilled person can do when attempting to combine the teachings of McLeese and Zheng '915. Specifically, even when the skilled person starts with McLeese and then encounters Zheng '915, this person would not know how to modify McLeese to obtain the claimed structure. For example, in order modify McLeese to provide the end edges of the upper panel extending beyond the outer periphery of the base panel, the skilled person would need to (i) change the locations of the pieces (H), and (ii) change the rounded shape of the end edges of the upper panel. However, there is no teaching, suggestion or incentive in either McLeese or Zheng '915 to make these modifications.

In addition to the above, using Zheng '915 as a starting point would not help the skilled person either. Zheng '915 teaches, in FIGS. 3A-3F, different ways to hingedly connecting the sides of two adjacent panels. Zheng '915 does not specifically state that any of these connections would cause an upper panel to extend beyond the outer periphery of a base panel. In addition, none of the embodiments in FIGS. 1, 6 and 7 provide a single upper panel, since they all have at least two upper panels. Providing a single upper panel that is coiled or tensioned (as in the present invention) involves different mechanics and forces when compared to providing a plurality of upper panels that do not experience any tensioning or coiling. Thus, if the skilled person starts with Zheng '915, this person would have no incentive to want to modify the structures in Zheng '915 to have only one upper panel (as taught by McLeese). In addition, even if the skilled person were to modify the structures in Zheng '915 to have only one upper panel, the tension and coiling forces experienced by the single upper panel would likely cause the end edges of that single upper panel to lie inside of the outer periphery of the base panel.

Applicant expects the Examiner to take the position that all of the claimed limitations

are disclosed (albeit in piecemeal fashion) in McLeese and Zheng '915, so that the skilled person can easily come up with the claimed structure. However, Applicant respectfully submits that such a simplistic position is based on impermissible hindsight reconstruction, and fails to consider exactly what the skilled person would be thinking when this person considers the two cited references side-by-side.

In light of the above reasons, claim 1, and claims 2-4 and 71-72 depending therefrom, are submitted to be in condition for allowance.

Since this rejection was the only issue raised in the Final Office Action, Applicant respectfully submits that the pending application is now in condition for allowance.

In light of the above, entry of the amendments, and allowance of all pending claims is respectfully solicited. The Examiner is invited to telephone the undersigned if there are any informal matters that can be resolved in a phone conversation, or if the Examiner has any suggestions or ideas that would further advance the prosecution of this case.

Respectfully Submitted,



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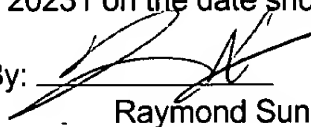
Date: April 14, 2003

CERTIFICATE OF MAILING

I hereby certify that this paper is being deposited with the United States Postal service as First Class Mail in an envelope addressed to the Assistant Commissioner of Patents, Washington, D.C. 20231 on the date shown below.

Date: April 14, 2003

By:


Raymond Sun

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Marked up replacement paragraphs: None

Marked up rewritten claims:

1. (Twice Amended) A collapsible structure, comprising:

a single first base panel having a foldable frame member that has a folded and an unfolded orientation, and a material [partially] covering portions of the frame member when the frame member is in the unfolded orientation, with the material assuming the unfolded orientation of its associated frame member, the first panel having an outer periphery;

a single second upper panel defined by a single foldable frame member that has a folded and an unfolded orientation, and a material [partially] covering portions of the frame member of the upper panel when the frame member of the upper panel is in the unfolded orientation, with the material of the upper panel assuming the unfolded orientation of its associated frame member, the second panel having opposing first and second end edges;

a first interconnecting piece that couples the first end edge of the second panel to the outer periphery of the first panel; and

a second interconnecting piece that couples the second end edge of the second panel to the outer periphery of the first panel;

wherein the first and second end edges extend beyond the outer periphery of the first panel [to provide an extension between the first and second panels].